

THE INTERACTION OF THE A-B STATUS  
OF PSYCHIATRIC AIDS AND EFFECTIVE COMMUNICATION  
OF EXPECTANCIES TO SCHIZOPHRENICS

By

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DEDICATION

To Janet, and to my parents John C. and Helen Taylor.

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In this project, A and B type psychiatric aids were studied in interaction with high and low social competence schizophrenics. The effect of aid type x patient type pairings on the communication of experimenter expectancies from the aids to the patients was studied.

Sixteen aids and 124 patients from Florida Northeast State Hospital were used as subjects. Aids were selected on the basis of scores on a modified version of the Kemp 30-item A-B questionnaire. All aids participating in the study were Caucasian. Of 17 male aids completing and returning the questionnaire, four extreme scorers were classified as As and four as Bs. Of 36 female aids

completing and returning the questionnaire, four extreme scorers were classified as As and four as Bs. Patients participating in the study were all male inpatients at the hospital diagnosed upon last admission as schizophrenic. High and low social competence status was assigned a patient after a review of his chart and an interview. Five social history variables taken from the schema of Zigler and Phillips were used in rating level of social competence. These were age, education, occupation, employment history, and marital history.

The basic experimental procedure consisted of each aid administering to each of eight or less patients the Rosenthal picture rating task, designed to study experimenter expectancy effects. In this task the subject (patient) is asked to rate on a scale ranging from -10 to +10 the degree of success or failure the persons pictured in a series of ten neutral photographs have been experiencing. Expectancies were established by means of the instructions read by the investigator to the aids, and by the investigator telling each aid immediately prior to the aid's meeting each patient that the patient was one of two basic personality types, and would therefore average +5 or -5 on his photo ratings.

Dyads studied were male A type aids with low and high social competence schizophrenics; female A type aids with high and low social competence schizophrenics; male B type aids with high and low social competence schizophrenics; and female B type aids with high and low social competence schizophrenics.

After the administration of the picture rating task each aid and patient were separately asked to rate on five-point Likert type scales their impressions of their partners in the picture rating task.

Later five male and three female undergraduates rated audiotapes of the aids reading the standardized instructions to the picture rating task on 12 voice qualities.

Dependent variables were the expectancy scores, voice quality ratings, and interpersonal impressions ratings from each of the eight aid type x patient type dyads. It was predicted that As of both sexes would be more effective than their B counterparts in unintentionally influencing low social competence schizophrenics toward established expectancies, and that Bs of both sexes would be more effective in influencing high social competence schizophrenics. It was further predicted that ratings of voice qualities and interpersonal impressions ratings would vary in predictable ways according to the aid type x patient type pairings.

Statistical analysis demonstrated that male Bs were more effective than male As in unintentionally influencing high social competence schizophrenics, and that female Bs were also more successful with this group than were female As. Neither male nor female As, however, were more successful than their B counterparts in influencing low social competence schizophrenics. Analysis of the data

gave little support to the voice quality and interpersonal impressions hypotheses.

The findings of this study do not support previous findings in related research utilizing many of the same procedures. Possible explanations for this fact are presented along with implications this study has for future research.

## INTRODUCTION

### The A-B Variable and the Interaction Hypothesis

One of the most interesting and potentially productive areas of research in psychotherapy has been the study of A and B therapist "types." The A-B variable has been extensively studied in actual psychotherapy and in psychotherapy analogue situations. The results of these studies, though often complex and sometimes seemingly paradoxical, have made it clear that the interaction of measurable therapist characteristics with patient characteristics potently affects the success and process of psychotherapy.

Whitehorn and Betz first distinguished A and B therapists in 1954. Working at the Phipps Clinic at Johns Hopkins Hospital, they retrospectively examined the attributes of 14 of the 35 psychiatric residents who worked at the clinic between 1944 and 1954, and who met the criterion of having treated at least four neurotics and four schizophrenics. The seven therapists with the highest success rates in treating schizophrenics were designated As and the seven with the lowest rates were designated Bs. As and Bs were equally successful in treating neurotic patients. The 100 patients seen by these therapists were hospitalized. They were mostly of middle and

upper-class socioeconomic status. At least half were female. Improvement data, and data indicating that A and B therapists were characterized by different therapeutic styles, came from ward charts, analyses of nurse's notes, conference notes, and discharge status reports (Whitehorn and Betz, 1954).

Until 1956, As and Bs were classified as such solely on the criterion of their differential effectiveness with schizophrenics. Then, in a study designed in part to explore the question of whether contrasting personal qualities distinguishing As from Bs could be demonstrated and characterized, Whitehorn and Betz began to focus on the Strong Vocational Interest Blank (SVIB) as a research tool, because it was well standardized, and because it was not psychopathologically oriented, but focused on human interests (Whitehorn and Betz, 1960).

The SVIB was administered to 35 therapists, some from the original 1954 study, some from a 1956 study, and some from unidentified sources. It was found that A therapists differed from Bs on four scales of the SVIV. As scored high on the Lawyer and CPA scales and low on the Printer and Mathematics-Physical Science Teacher scales, whereas Bs showed the opposite pattern on these four scales. Item analysis subsequently identified 23 items on the SVIB which reliably differentiated between therapist types (Betz, 1962; 1967).

Scores on some combination of the SVIB items or scales then became the defining measure of A-B therapist status in

future studies of the A-B variable.

In 1962, McNair, Callahan, and Lorr found that with nonschizophrenic male outpatients, B therapists were significantly more successful than A therapists on several outcome criteria. Subjects were 55 therapists from seven Veterans Administration clinics and their 40 male outpatients. Rating of patient change were derived from the Taylor Manifest Anxiety Scale, Barron's Ego Strength Scale, a symptom checklist, a self-satisfaction rating scale, therapist ratings of severity of illness, Interview Relationship changes, and an Interpersonal Changes and Symptom Reduction Scale.

The combination of the Whitehorn and Betz studies (summarized in Betz, 1962; 1967) and the McNair et al. study (1962) generated the interaction hypothesis, which has guided subsequent research on the A-B variable. The hypothesis, as originally formulated, is that As achieve greater success with schizophrenic patients and Bs achieve greater success with neurotics.

Significant differences between the Whitehorn and Betz (1954) and the McNair et al. (1962) studies allow for other interpretations of the results. (Chartier, 1971). The process and outcome measures in the two studies differed, and the possible effects of hospitalization were uncontrolled. Also the patient samples differed in ways other than their diagnostic categories. Most of the McNair et al. patients

were of lower or lower-middle class background, and all were males, whereas the Whitehorn and Betz patients were mostly middle and upper class, and at least half were female. Furthermore, Whitehorn and Betz found no differences in the success rates of As and Bs in the treatment of neurotics.

In spite of this questionable foundation for the interaction hypothesis, it has generated a great deal of research which has found the interaction of A-B status and patient "type" to operate in a complex and potent way as a determiner of behavior in a variety of contexts which have implications for fundamental psychotherapeutic processes, other interpersonal processes, and patient management.

Most studies of the A-B phenomena can be classified as one of four types: 1) clinical studies of psychotherapists in interaction with patients; 2) psychotherapy analogue studies utilizing A and B quasi-therapists interacting with patients, pseudopatients, or material representative of patient symptomatology, in situations assumed to be analogous to psychotherapy; 3) studies of attitudes of A and B therapists and quasi-therapists toward different patient "types"; and 4) studies of personological differences between As and Bs. Many studies are relevant to more than one of these areas of inquiry.

The research which this dissertation attempts to replicate



and extend (Trattner and Howard, 1970), opened a new line of inquiry into the A-B phenomena: the differential ability of A and B psychiatric aids to unintentionally influence relatively high and low social competence schizophrenic inpatients (Zigler and Phillips, 1960), as measured by the Rosenthal (1966) picture sorting task, a standardized procedure originally designed to measure the effects of experimenter bias on experiment outcome.

The major studies of the A-B phenomena are reviewed in the following sections.

#### Later Clinical Outcome Studies

In 1956 Betz and Whitehorn reported a study of the A-B phenomenon with 109 schizophrenic patients not included in the 1954 study. They did not report how many, if any, therapists in this study were participants in the 1954 study. The patients were divided into a group of 45 who received psychotherapy only, and a group of 64 who received both insulin shock therapy and psychotherapy. For patients receiving therapy only, As showed an 82% improvement rate (based on a three-part rating of discharged patients by three psychiatrists, including the patient's psychiatrist) as compared to the Bs' 34% improvement rate. The same differences between As and Bs in therapeutic approach noted in the 1954 (Whitehorn and Betz) study were again

statistically significant.

With the 64 patients who received both insulin shock therapy and psychotherapy, As and Bs showed identical 82% improvement rates. Furthermore, patients treated by Bs received "active personal participation," a therapeutic style previously found to be characteristic only of As in dealing with schizophrenics.

Betz pointed out a further important A-B distinction in 1963, upon reexamining all of the 93 patients at the Phipps Clinic from 1948-1954 who stayed for at least a month and received no shock therapy. She found differential success rates of As and Bs even more striking when schizophrenics were divided into process and nonprocess, or reactive types. Although process patients are considered to have poorer prognoses than nonprocess patients (Bleuler, 1950), As had 71% improvement rates with process schizophrenics while Bs had 18% improvement rates with this population. With nonprocess patients, As had a 68% improvement rate, Bs, a 44% rate.

These findings led Carson (1967) to infer that As are superior to Bs in working with more inaccessible, severely disturbed patients, but that this superiority largely disappears when patients are less inaccessible and disturbed by virtue of shock treatment or by virtue of the reactive nature of their disorder.

Setphens and Astrup (1965) examined 4-14 year follow-up data for 236 patients for whom data was available, who were hospitalized at the Phipps Clinic between 1950 and 1960. Examining the effects of insulin treatment, patients' progress vs. reactive status, and therapist A-B type, they found almost no effect of A-B therapist classification. Their indices of follow-up status--letters, telephone conversations, and personal contacts with patients and their relatives--were inprecise, however, and no mention was made of how consistently available each of these sources was, or how each was weighted.

Betz (1967) argued against the validity of the Stephens and Astrup study by pointing out that the unimproved category of patients became too small (about 30%) between 1955 and 1960 to be statistically comparable to the 50% unimproved group before 1955, and that between 1955 and 1960 ataractic drugs were utilized in patient care, making Stephens and Astrup's sample unlike the psychotherapy only sample of the early Whitehorn and Betz studies (Betz and Whitehorn, 1956; Whitehorn and Betz, 1954).

Chartier's (1971) reasoning that with the introduction of ataractic drugs in the period following the original Whitehorn and Betz studies, the relevance of the A-B distinction may have been lost, is important to note in evaluating Betz's argument. Noting that present average annual

improvement rates for hospitalized schizophrenics have exceeded 70%, a figure comparable to the improvement rate attained by As in the psychotherapy only condition of the 1954 Whitehorn and Betz study, Chartier speculates that psychotropic drugs, by virtue of their symptom-reducing effect, may operate in such a way as to render insignificant the special qualities of a given therapist, resulting in high improvement rates regardless of A-B status. The finding that with patients presumably more accessible to therapy by virtue of having received insulin shock, As and Bs have equivalent success rates (Betz and Whitehorn, 1956), lends support to this reasoning.

Three recent clinical studies have produced data which does not support the interaction hypothesis. Bendar and Mobley (1969) selected 13 As and 11 Bs from the 141 experienced therapists who agreed to participate in their study, and who were currently treating a client with a schizophrenic or neurotic diagnosis. Outcome measures included MMPI scores; therapist, patient, and psychometrician ratings of current adjustment; Spitzer Psychiatric Status Schedule ratings of current distress, behavioral disturbance, impulse control, reality testing, and total adjustment; and a Q-sort. Only the Q-sort yielded data confirming the interaction hypothesis. A further finding was that As were more effective than Bs in relieving subjective distress, especially with schizophrenics, and in improving general adjustment,

and that Bs were superior in facilitating impulse control, especially with schizophrenics. This study is of questionable value however, because the authors used a version of the A-B scale (Campbell, Stephens, Uhlenhuth, and Johansson, 1968) which correlates only .40 with other commonly used versions of the scale (Kemp and Stephens, 1971).

Using therapist's post-treatment evaluations and length of hospitalization as outcome measures, Beutler, Johnson, Neville, and Workman (1972) found no relationship of A-B therapist status and patient schizophrenic or neurotic status with outcome of therapy of 31 male and female patients receiving treatment at a private university affiliated psychiatric hospital. Beutler, Johnson, Neville, Workman, and Elkins (1973) measured outcome of therapy with 49 male and female schizophrenic and neurotic patients at the same institution by means of therapist improvement ratings. Again, no significant interaction effect was found.

In contrast, two recent clinical studies have supported the interaction hypothesis. In one, Berzins, Ross, and Friedman (1972) measured outcome of brief therapy in a college clinic by means of therapist evaluation of outcome, and patient evaluation of outcome and experienced rapport with their therapist. Results supported the interaction hypothesis, particularly with regard to the therapists' appraisal of their own effectiveness. B therapists also obtained much lower improvement and rapport ratings from

schizoid than neurotic patients, whereas As received equally high ratings with both diagnostic categories of patients.

In another clinical study supportive of the interaction hypothesis, 36 enuretic children were treated by their mothers, who served as behavior technicians following a one-hour training program in Mowrer's conditioning treatment for enuresis. B type mothers were significantly more successful in treating these neurotic symptoms than were A type mothers. (James and Foreman, 1973)

These studies taken together do not provide a sound basis for accepting or rejecting the interaction hypothesis. They are often contradictory. Generalization is made difficult by lack of uniform procedures for identifying As and Bs, lack of uniform criteria for evaluating outcome, and large variances in therapy settings and diagnostic procedures.

#### Clinical Studies of A-B Therapist Behavior

Several clinical studies have attempted to determine how, if at all, A and B therapists and their patients differ in their behavior in therapy. These studies are rather consistent in demonstrating that As and Bs behave differently with schizophrenic and schizoid patients and neurotic patients in psychotherapy.

Whitehorn and Betz (1954), examining case records,

found that As and Bs differed in their treatment of patients in several respects, four of which were significantly related to improvement. These categories were: the type of relationship formed by the therapist, the type of personal formulation of the patient's problems, the types of strategic goals selected, and the type of tactical pattern used.

As were better able to gain the confidence of their patients, and tended to better understand the motivation and meaning of their patient's behavior. They more often formulated goals in terms of having the patient develop a better understanding of his assets for constructive conflict resolution and developing a strong, meaningful therapeutic relationship. These were characterized as "personality-oriented goals" in contrast to the "psychopathologically-oriented goals" of B therapists: supervised living, symptom decrease, socialization, and insight into pathology. As were characteristically actively, personally involved with their patients while Bs adopted passive, interpretive, and/or instructional therapeutic stances. These characterizations were derived by a retrospective examination of case records.

In 1957, Betz again stressed the importance of active personal participation on the part of the therapists studied, noting that of the 71 patients in both the 1954 (Whitehorn and Betz) and 1956 (Betz and Whitehorn) studies receiving this kind of therapeutic behavior, 89% were rated as improved. In the condition of B therapist x insulin plus psychotherapy,

B therapists were rated as giving active personal participation in the therapy process.

McNair et al. (1962) found that As working with out-patient neurotics were like Bs working with schizophrenics in the Whitehorn and Betz studies in that they significantly more often stated goals in concrete-descriptive terms, and emphasized insight as goals. The combination of these studies seems to indicate that As and Bs change their therapy behavior when dealing with differing categories of patients.

In a study by Segal (1970), therapy scripts were content analyzed to obtain therapist attitudinal and behavioral oral ratings. Subjects were twenty male clinical psychology students who were seeing patients in therapy as part of their training. Each of the therapists completed the Symptomatic Behavior Inventory Rating Scale for each client he was seeing in psychotherapy. This inventory was derived from the Phillips and Rabinovitch (1958) classification schema designed to distinguish between neurotic, or turning-against-self (TAS) and schizoid, or avoidance-of-other (AOS) behavior. For each therapist, two therapeutic interactions with one turning-against-self client were recorded. Results showed that with this neurotic group of patients, Bs made fewer negative comments, were more facilitative and encouraging of self-exploration, and placed less emphasis on having patients respond to specific questions or ideas. As were



more directive and interpretive.

A series of studies (Scott and Kemp, 1971; Beutler et al., 1972; Beutler et al. 1973) attempted to relate the A-B status of therapists to differential quality of therapist-offered conditions (Truax and Carkhuff, 1967) manifested in therapy with schizophrenic and neurotic patients.

In the Scott and Kemp study of initial interviews conducted by 25 senior medical students with an equal number of neurotic outpatients, there were no significant relationships between therapist A-B status and their rated empathy, warmth, and genuineness. As was predicted, however, B therapists elicited greater depth of self-exploration from their patients.

In the Beutler et al. 1972 study, fourteen neurotic and four schizophrenic patients were seen by A therapists, and four neurotic and nine schizophrenic patients were seen by B therapists. Pairings were rated for therapist empathy. Results showed As with schizophrenic and Bs with neurotic patients displayed more empathy.

In the Beutler et al. 1973 study, initial interviews of six experienced psychiatrists with 29 neurotic and 20 schizophrenic inpatients were transcribed. Data indicated that A therapists were more empathetic with schizophrenic than with neurotic patients, whereas for B therapists, no therapist-offered conditions significantly differed with patient type.

### Analogue Studies of A-B Psychotherapy Behavior

Several analogue studies, reviewed below, have attempted to verify the interaction hypothesis and clarify the nature of the interaction of A and B therapists with schizoid or schizophrenic and neurotic patients. With one exception (Berzins, Ross, and Cohen, 1970), these studies have used male college students as quasi-therapists.

In one of the few analogue studies not supporting, at least in part, the interaction hypothesis, Seelig (1969) had male undergraduates listen to tape recorded segments taken from interviews with normals, neurotics, and schizophrenics, and respond "therapeutically" at pre-selected intervals. No therapist type main effects or therapist x patient interaction effects reached statistical significance. The hypothesis of the study was that As with schizophrenics and Bs with neurotics would enter into "active personal participation" (operationalized along three dimensions) more often than in the opposite pairings.

Vaughn (1969) used graduate students in clinical psychology who were extreme scorers on the A-B continuum as subject-therapists. They listened to tape recorded therapy interviews of patients classified as either TAS types or AOS types (Phillips and Rabinovitch, 1958), and responded as if they were interacting with the patients in therapy. As responding to AOS patients and Bs with TAS patients, as

predicted by the interaction hypothesis, were warmer and more sympathetic than when the pairings were reversed.

In another study of this type A and B volunteer undergraduate males responded "helpfully" and "naturally" at four points of interruption in videotaped enactments of TAS and AOS patient prototypes. Ratings of responses indicated that as predicted by the interaction hypothesis, communication of respect and empathetic understanding as well as response duration of subject-therapists was a joint function of A-B status and patient type. (Seidman, 1971)

Berzins and Seidman (1969) had 72 male undergraduates write self-chosen "helpful" responses to tape recorded, enacted patient communications intended to represent schizoid (AOS) and neurotic (TAS) communications. Subject-therapists were divided into As, Bs, and ABs (middle-range scorers on the A-B scale). Relative to the opposite pairings, when As were paired with the schizoid and Bs with the neurotic patient enactments, they gave longer responses, emitted more responses of a declarative as opposed to questioning form, and showed more positive and fewer negative Bales social-emotional reactions. ABs did not react differentially to the two patient types.

Dublin and Berzins (1972) found A and B males, instructed to respond verbally and therapeutically to videotaped enactments, more direct and intense in their communications in response to schizoid and neurotic enactments, respectively.

Berzins, Seidman, and Welch (1970) had male undergraduate As, ABs, and Bs write helpful responses to enacted tape recorded communications purportedly of clinic patients. Instead of AOS-TAS enactments, enactments were intended to represent one patient who handled anger in an extrapunitive (EXT) way and one who handled anger in an intropunitive (INT) way. As paired with the EXT and Bs with the INT enactments were more satisfied with their helping performances than were Bs oppositely paired. Several other measures of quality of response and post-experimental self-ratings of subjective reactions to the enactments yielded only limited support for the interaction hypothesis.

Carson, Harden, and Shows (1964) constructed a quasi-therapeutic situation in which A and B college students interviewed other students. Instructions to the interviewees attempted to establish interviewee sets simulating attitudes and behaviors of schizophrenics and of neurotics--that is, distrust-hostility-expectancy of harm (DHH) and trust-friendliness-expectancy of help (TFH), respectively. In tape recorded sessions, the interviewers obtained as much information as possible in 18 different content areas and these interviews were subsequently rated regarding the adequacy of information obtained. The expected interaction between interviewer type and interviewee set was not significant for adequacy of information, but the interaction was significant when the tapes were rated in terms of the number of content

areas explored by the interviewers.

Jacob and Levine (1968) used the same procedure in a study of college students, with one major modification. Instructions to interviewees for the purpose of inducing a DHH or TFG set were tape recorded rather than given personally, in order to control for covert effects of experimenter bias. Results did not support the findings of Carson et al. (1964).

In the only analogue study of this type in which real patients were utilized, psychiatric aids conducted brief interviews with hospitalized narcotics addicts. Prior to being interviewed by an aid, patients were briefed by an assistant who attempted to induce a DHH or TFH expectancy. As predicted, A type aids with DHH patients and B type aids with TFH patients obtained better patient self-disclosure in personal topical areas. (Berzins, Ross, and Cohen, 1970)

#### Studies of A-B Therapist Attitudes

Although the clinical studies of therapy outcome have been equivocal in their findings, the clinical therapy process studies and analogue therapy studies outlined above have in general been supportive of the hypothesis that As and Bs behave differently and are differentially effective in therapy and interview situations with neurotic and

schizophrenic or schizoid patients. Several studies have attempted to discover attitudinal variables and subjective reactions to patients manifested by A and B therapists and quasi-therapists which may in part account for this phenomenon. Another series of studies, outlined in the next section, have had as their aim the delineation of stable personality variables characteristic of As and Bs that may account for their varying behavior and success with different types of patients.

Kemp (1966) had male college students choose therapeutic responses at predetermined intervals in recorded interviews of actors playing the roles of AOS and TAS patients. As with AOS "patients" and Bs with TAS "patients" reported more discomfort and difficulty in selecting helpful responses. This finding, supported by additional research (Carson and Klein, 1965), raised the possibility that As and Bs were most successful with patients who produced the greatest subjective discomfort in them. The label "paradoxical discomfort" was given to this hypothesis.

In another investigation supportive of the paradoxical discomfort hypothesis, medical students evaluated bogus case histories written to represent a schizoid and an intro-punitive-neurotic patient. (Kemp and Sherman, 1965) Compatible pairings (As with schizoids and Bs with neurotics) were characterized, as measured by a 22-item questionnaire, by less interest on the part of the medical students in treating the patient,

less confidence in outcome, feelings that the patient was less like an ideal patient, and anticipation of more difficulty in determining etiology.

Kemp and Carson (1967) replicated the procedure of the Kemp and Sherman (1965) study, but used psychiatric residents as Ss. They found As, in rating the schizoid patient, and Bs, in rating the neurotic patient, expected that they would be more uncomfortable in treatment with the patient. The data failed to replicate the findings of Kemp and Sherman, however, and the authors hypothesized that paradoxical discomfort may be partially offset by the effects of professional training and experience.

Other researchers have reported findings that belie the notion of a paradoxical discomfort phenomenon. Berzins and Seidman (1969), although using a methodology and a subject population very similar to Kemp (1966) reported opposite results. As and Bs reported more satisfaction with their helpful responses when in compatible pairings--As with AOS and Bs with TAS enactments. Berzins, Seidman, and Welch (1970) also reported students felt more satisfaction with their helpful responses when in compatible pairings--As with EXT enactments, and Bs with INT enactments. In their study of 32 practicing psychotherapists, Bender and Mobley (1969) found no evidence that A and B therapists as categorized by the Campbell et al. (1968) A-B scale differentially perceive or prefer neurotic or schizophrenic patients.

Anzel (1970), and Stein, Green and Stone (1972), included patient socio-economic status as a variable in their studies of A and B therapist's attitudes toward patients.

Anzel varied patient characteristics presented to 48 male experienced therapists and 30 male undergraduates on the dimensions of type of pathology (AOS-TAS), severity of pathology (severe-mild), and social class (upper-lower). Patient characteristics were presented by means of excerpts of recordings from contrived therapy interviews and by bogus written case histories of the patients. As hypothesized, A therapists responded more favorably than Bs to AOS, severely disturbed, and upper-class patients; and B therapists responded more favorably to TAS, mildly disturbed, and lower-class patients. Student As and Bs were not consistently similar or dissimilar to their therapist counterparts.

Stein, Green, and Stone (1972) had 37 psychiatric residents rate patient vignettes on likeability, discomfort, interest in treating, and prognosis. Patient social class as well as diagnosis was systematically controlled. Bs assigned significantly higher likeability ratings to neurotics than to schizophrenic patients while As did not differentiate between the two diagnostic types. There were no patient type x therapist type interactions on the other variables. Both As and Bs in general held more



favorable attitudes toward neurotic and middle-class patients than they did toward schizophrenic and lower-class patients. This finding is consonant with previous research which has shown a therapist bias favorable to neurotic, non-lower-class patients. (Hollingshead and Redlich, 1958; Kaplan, Kurtz, and Clements, 1968; Kurtz and Kurtz, 1968)

#### Personality Characteristics of As and Bs

The most obvious personality differences of As and Bs are of course their differential vocational interest patterns as shown on the SVIB. As score high on the Lawyer and CPA scales and low on the Printer and Mathematics-Physical Science Teacher scales, whereas Bs show the opposite pattern on these four scales. Carson (1967) reported a factor analysis of SVIB findings and their data on therapeutic style and outcome, Whitehorn and Betz (1960) drew a composite picture of the personal characteristics of A and B therapists. They hypothesized that As are like lawyers in that they are problem-solvers, managing to find patients' resources and encouraging acceptable modes of behavior. They hypothesized that As are not regulative or coercive but instead reward free self-determination in their patients, in contrast to Bs, who emphasize conformity, deference, and mechanical approaches to therapy.

These hypotheses are of course speculative. Later

personality studies of As and Bs are more solidly based, resting upon evidence gathered from the administration of tests of cognitive style and other personality characteristics to samples of As and Bs.

Pollack and Kiev (1963), using the same male staff members of the Phipps Clinic as did Whitehorn and Betz in their original studies, found that in spatial orientation as measured by the Witkin Rod and Frame Task, Bs demonstrated significantly more field independence than As. Shows and Carson (1966) replicated this finding with college students. Their subjects did not significantly differ, however, with regard to scores on the Witkin Embedded Figures Test of field dependence-independence.

Pollack and Kiev (1963) felt that their finding that A therapists were more field dependent was consistent with the flexible, reciprocal, more personal nature of the therapeutic relationship characteristic of As with schizophrenics, and that the field independence of Bs was consistent with the view that these therapists are more precise and detached in interpersonal situations.

Silverman (1967) reviewed the A-B literature and the research in field dependence-independence and offered a speculative composite description of A and B male therapists. Briefly, As were seen as more responsive to attributes of the perceptual field and as a consequence more capable of relaxing their reality orientation and responding to hunches

and intuition. Silverman theorized that As are therefore more empathetic with schizophrenics than are Bs, who share the practical, goal-directed point of view typical of neurotics, and are in general more empirically than intuitively oriented.

Portnoy and Resnick (1972) found A type male undergraduates conditioned significantly better in a verbal conditioning task than did Bs. They interpreted their results as consistent with the Pollack and Kiev (1963) and Shows and Carson (1966) findings, reasoning that subjects in a verbal conditioning task who are more sensitized and dependent on external cues for their behavior would condition better than subjects who are less field dependent.

Fancher, McMillan, and Buchman (1972), studying undergraduate males, found evidence with a test of accuracy in person perception and a role taking test of accuracy of empathy that As tend to be more intuitive, empathetic, and more in touch with emotional processes than Bs, whereas Bs tend to be more rational and intellectual in their approach to interpersonal situations.

Berzins, Seidman, and Welch (1970) advanced the hypothesis that therapist-patient complementarity on dimensions related to modes of reacting to stress may in part account for the differential success of As and Bs with neurotic and schizoid patients. In doing so they hypothesized a TAS reaction to stress as possibly characteristic of As. In

support of this idea they cite studies which have shown that As appear to display trusting-intropunitive responses when under stress (Sandler, 1965); display depressive symptomatology as clinic patients, including internalization of anger and suicidal ideation (Berzins, Friedman, and Seidman, 1969); and respond to stimuli of the Rosenzweig Picture Frustration Study with significantly fewer extrapunitive responses than ABs or Bs (Welch and Berzins, 1968).

Lorr and McNair (1966) suggested that since A-B scale items correlate significantly with the masculinity-femininity scale of the SVIB, sex-role identification might underlie A-B differences, with As being less masculine than Bs. This hypothesis received strong support from a study by Dublin, Elton, and Berzins (1969).

Dublin et al. gave the Omnibus Personality Inventory (OPI), the American College Test, and an A-B scale to over 1200 male and almost as many female freshman college students. Ninety-eight A and ninety-nine B males, along with ninety-eight female As and seventy-three Bs were selected for the study. These groups consisted of persons scoring  $\pm$  one standard deviation from the mean on the A-B scale.

For both sexes Bs and ABs (persons randomly drawn from middle-range scorers on the A-B scale) showed progressively higher scores on masculinity than did As. Additionally,

the OPI scale which best discriminated the female groups was Theoretical Orientation. This scale suggests masculine pursuits in that it is a cognitive style scale which measures interest in science and scientific activity, and a logical, rational, critical approach to problems. Male Bs, consistent with their higher masculinity scores, also scored higher on natural science abilities while male As outscored Bs on verbal abilities. For both males and females, Bs scored significantly higher on the Cognitive Complexity scale of the OPI, which the authors describe as a scale measuring the ability to "withstand and persevere in the face of new, novel, uncertain, or ambiguous events." (Dublin et al., 1969)

Berzins, Barnes, Cohen, and Ross (1971), and Berzins, Dove, and Ross (1972), gave the Personality Research Form (Jackson, 1967) to large samples of As and Bs. The 1971 study of 233 male undergraduates and 50 male professionals (psychologists, psychiatrists, counselors, and social workers) found the B pole of the A-B dimension was related to social ascendancy and openness to complex experiences, whereas the A pole was related to caution, social ineptness, and a restricted cognitive scope. The authors observed a strong masculinity-femininity component in the variables differentiating As and Bs, with Bs at the masculine pole.

The Berzins et al. 1972 study involved four samples of As and Bs: 94 male professionals, 661 male undergraduates,

114 male college clinic patients, and 720 female undergraduates. Although these groups differed at least with regard to vocational commitment, training, age, sex, and degree of adjustment, As and Bs, defined for each sample as scorers in the outer quartiles of the A-B distribution for that sample, were found to be extreme and opposite scorers on five Personality Research Form scales: Harm-avoidance, Dominance, Change, Sentience, and Succorance. Briefly, A type Ss in each sample could be described as relatively cautious, submissive, uninclined to seek variety or sensual pleasure for its own sake, and as somewhat succorant. The B type Ss on the other hand showed a risk-taking, dominant, variety-seeking and counterdependent orientation.

This study is an affirmation of the hypothesis underlying the many analogue studies cited above in which A and B undergraduates were assumed to be personologically similar to A and B therapists. It is also important in combination with the Dublin et al. (1969) research in indicating that female As and Bs vary along the same personological dimensions in the same directions as do male As and Bs, who have been the subjects of nearly all research involving the interaction hypothesis.

### The A-B Variable and Unintended Interpersonal Influence

In studies utilizing the methodology originated by Rosenthal (1966) to examine the effects of experimenter expectancies on the outcome of psychological research, Trattner and Howard (1970), and Persinger, Knutson, and Rosenthal (1968), found that A and B psychiatric aids are differentially effective in unintentionally influencing psychiatric patients of differing diagnostic categories.

In the prototypical Rosenthal experiment, Es present to each of their Ss a series of 10 standardized photographs of male and female faces. The Ss judge the degree of success or failure the person pictured seems to be experiencing. Plus scores, up to +10, are assigned by the S if he judges the person pictured to be successful. Minus scores up to -10 are given if he judges the person pictured to be failing. When a third party instills an expectancy in E as to the predicted performance of S, E tends to elicit that performance--that is, he tends to "bias" the responses of S to a task that statistically has been shown to normally elicit neutral responses. The experimenter may be told, for example, that S is of a personality type that ordinarily averages scores of +5 on the task, or that he is of a type that ordinarily averages -5, whereas in fact an average score of 0 is the normal neutral response to the task when experimenter bias is not instilled. (Rosenthal, 1966)

Trattner and Howard (1970) chose two As and four Bs from 28 of the 118 male attendants at Boston State Hospital who returned a Kemp 31-item A-B questionnaire. (Kemp and Stephens, 1971) Fifty male schizophrenics were randomly assigned to the attendants. The attendants administered the Rosenthal picture rating task to the patients. Just prior to the testing of each patient, attendants (Es) were told that the patient (S) was either of a personality type that averaged +5 or of a type that averaged -5 in rating the success of the persons pictured. The patients were classified as belonging to a relatively high social competence group or a low social competence group on the basis of the Zigler and Phillips (1960) classification system. As predicted, A attendants biased low social competence patients in both + and - directions significantly more than did Bs, while Bs biased high social competence patients more than did As.

Social competence scores are derived from case history data about the patient's age, intelligence, education, occupation, employment history, and marital history. (Zigler and Phillips, 1960) The concept of level of social competence is similar to the concept of degree of severity of psychological disturbance. TAS behavior is more typical of relatively higher levels of social competence, and AOS behavior is more typical of relatively lower levels of social competence. With regard to hospitalized



schizophrenics, level of social competence is very similar to the concept of premorbid adjustment. Lower levels of social competence reflect poorer quality of premorbid adjustment, whereas high social competence scores reflect better premorbid adjustment and a greater likelihood that the disorder is reactive in nature.

In a finding supportive of the Trattner and Howard (1970) findings, Jenkins (1966), using college experimenters and subjects, found that B type Es, as predicted, showed greater effects of their expectancies than did A type Es. This is supportive of Trattner and Howard's study in that college student Ss are closer to neurotic or high social competence status than to schizophrenic or low social competence status.

In the Persinger et al. research (1968), a variety of patients served as subjects while both male and female ward personnel served as experimenters. Contrary to prior A-B research, patients were not selected on the basis of severity of disturbance, but on the basis of primary categorization as relatively more hostile than anxious (paranoid and character disorder) or relatively more anxious than hostile (schizophrenic and neurotic). Results showed that greater expectancy effects were exerted by A type male Es and B type female Es with patients categorized as relatively more anxious. With patients categorized as relatively more

hostile, B type male Es and A type female Es showed greater unintended influence.

#### Extending the A-B Variable to Females

The Persinger et al. study (1968) is unusual in that it is one of the few studies in which female As and Bs were subjects in research on the A-B interaction phenomena. Due to the nature of the A-B scale, which on its face measures relative interest in mechanical, engineering, and manual activities (Carson, 1967), nearly every one of the A-B therapy or therapy analogue studies has used only males as therapists or quasi-therapists. Two exceptions in addition to the Persinger et al. study are Berzins, Ross, and Friedman (1972), in which two of the six therapists studied in a college clinic were female; and James and Foreman (1973), who studied the relative effectiveness of A and B mothers in utilizing a conditioning technique to treat enuresis in their children. Both studies supported the A-B schizophrenic-neurotic interaction hypothesis.

Additionally, research by Berzins, Dove and Ross (1972) and Dublin, Elton, and Berzins (1969), both extensive studies of personality traits of As and Bs, found that A and B female college students differ from each other in personalogical characteristics as measured by the Personality Research Form and the Omnibus Personality Inventory in the same ways

as do male college students, male outpatients, and male professional psychotherapists. These findings imply that it will be fruitful in future A-B studies to include therapist or psychiatric aid sex as an independent variable.

Implications of the Interaction of A-B Status  
and Interpersonal Influence with Hospitalized Patients

A strong case has been made that traditional verbal psychotherapy is a method of persuasion--the therapist does not use force to get his way, but uses his verbal interpersonal skills as tools in trying to effect change in his client's behavior. (See London, 1969, for a discussion of verbal psychotherapy as a method of behavior control characterized by subtle persuasion.) For this reason the findings of Trattner and Howard (1970) and of Persinger et al. (1968) are significant to the study of psychotherapy, for they imply that As and Bs are differentially effective in influencing differing types of patients to conform to their expectancies. Separate studies dealing with individual and group therapy with client populations of neurotics, psychotics, juvenile delinquents, and the physically and mentally disabled, have all converged in demonstrating that therapists high in persuasive potency produce better client personality and behavioral improvement than equally trained therapists who are lower in persuasive potency or personal social influence value (Truax, Fine, Moravec, and Millis, 1968; Truax, 1969).

Apparently the persuasive potency of As and Bs fluctuate according to the kind of patient with whom they are interacting. Of course the Trattner and Howard and Persinger et al. studies dealt with psychiatric aids rather than actual psychotherapists, but findings indicate that personality correlates of A or B status are constant across a wide range of age, sex, level of adjustment, and professional training. (Berzins, Dove, and Ross, 1972; Fancher, McMillan, and Buchman, 1972; Dublin, Elton, and Berzins, 1969; Shows and Carson, 1966; Pollack and Kiev, 1963)

Perhaps more important than the implications which these studies hold for the understanding of individual psychotherapy, are their implications with regard to psychiatric hospital milieu therapy and patient management. Lacking the resources for, and uncertain as to the relative value of formal one-to-one psychotherapy, especially with schizophrenics, most psychiatric hospitals today rely on ataractic drugs and milieu therapy as primary modes of treatment. Nurses, aids, and other ward personnel spend a great deal of time with patients. Their attitudes toward the patients, their ability to make them feel at ease, and their ability to effectively talk to them and to therapeutically guide their behavior, are all important to effective milieu therapy.

It seems practical then, if findings such as those of Trattner and Howard (1970) can be replicated and perhaps

extended, to match wherever possible aids and other ward personnel with patients with whom they are most effective. Any one of the A-B scales now in use takes less than five minutes to fill out, and is essentially of a non-threatening nature, so there is little practical reason not to administer it to incoming personnel. If, as in an effective hospital it must be, the generalized expectation is that patients will improve, or that particular programs will prove beneficial to a patient, the persons in intimate contact with the patient in his everyday hospital activities should be able to effectively communicate that expectancy.

#### Purposes of the Dissertation

There were four main research goals for this dissertation:

1. The first purpose was to determine if the findings of Trattner and Howard (1970) are replicable; i.e., if by means of the Rosenthal picture rating task, A type male aids influence low social competence (S-C) male hospitalized schizophrenics to a significantly greater degree than do male Bs, and B type male aids influence high S-C male schizophrenics to a significantly greater degree than do male As.
2. The second aim of the study was to determine how the interaction of A and B type with high and low S-C schizophrenics is effected by the sex of the aids. Since so many psychotherapists and hospital personnel are female, and since the Persinger et al. study (1968) indicates that A and B type

females interact with patients on the picture rating task in different ways than do males, this is an important area to explore.

3. The third aim of the study was to contribute to an understanding of how vocal qualities of the aids in reading the standardized instructions of the Rosenthal picture rating task are related to the various pairings of patients and aids. Trattner and Howard (1970) found that vocal qualities of Es are effected by the pairings and that this phenomenon seems to be related to effectiveness in biasing patients toward the expectancies induced in the aids (Es).

Rosenthal (1966) reports that, contrary to hypotheses that E's reinforcement of expected responses to the picture rating task mediate the communication of expectancy effects, data indicate that the very brief period in which the E greets, seats, and instructs the S is when expectancy effects are generated. Initial impressions that the E and S form of each other, and the way in which E reads the standardized instructions to the task, seem to be crucial.

Trattner and Howard (1970) had 13 Harvard College males rate tapes of Es reading the standardized instructions to patient-subjects on nine qualities: discomfort, coldness-distance, sophistication, self-confidence, dominance, professionalism, masculinity, warmth-friendliness, and awareness of the other. (The last variable was later dropped from the analysis of the data.) Judges were not given

definitions of any of these vocal qualities. There were no main effects on any of the qualities between A and B Es. However there were significant patient x experimenter interactions on all the rated voice qualities. As with low S-C schizophrenics and Bs with high S-C schizophrenics were rated higher on all qualities but discomfort and coldness, on which they were rated significantly lower. Inspection of the intercorrelations among the remaining variables suggested that there was one major dimension being measured, which the authors retrospectively labeled "social control."

In the dissertation research, vocal qualities of both male and female Es reading the standardized instructions were rated. Since it was thought probable that female Es would communicate expectancy effects with different vocal qualities than would male Es, the qualities of femininity, softness, and kindness were rated along with the eight qualities included in the Trattner and Howard experiment. The voice quality of enthusiasm was also rated.

4. As was mentioned above, the interaction between Es and Ss in the picture rating task is minimal: The Es greet the patients, seat them, and read the instructions. The patients then rate each picture, and the Es mark down their answers. In addition, care was taken in the Trattner and Howard study and in the present study to see that the aids and patients had not met each other prior to the experiment. These facts imply that the relative ability of each aid to

influence each type of patient is related to the initial impressions each of the participants in the experimental dyad form of their partners.

The fourth purpose of this dissertation, then, was to assess, immediately after the picture rating task was completed for each dyad, simple impressions that the participants formed toward each other during the brief (usually less than six minutes) time of their interaction.

On five-point Likert-type rating scales, the patients were asked to rate the degree to which they liked the aid that gave them the "test," their feelings of comfortableness with the aid, the warmth-friendliness of the aid, the dominance of the aid, the gentleness-kindness of the aid, and the self-confidence of the aid.

Also on Likert-type rating scales, the aids were asked to rate the degree to which they liked the patient, their feelings of comfortableness with him, their impressions of his warmth-friendliness, the degree to which the patient was at ease in the interaction, his cooperativeness, and his degree of involvement in the task.



## HYPOTHESES

There are three series of hypotheses. The first series involves the interaction of aid (E) type with patient (S) type in the degree of experimenter expectancy effects manifested. The second series of hypotheses has to do with the voice qualities that the four E types manifest when reading the standardized instructions for the picture rating task to each of the two S types. The third series deals with impressions that the four E types and two S types form of each other during the administration of the picture rating task.

### Experimenter Expectancy Hypotheses

- A1. A type male Es will exert greater expectancy effects with low S-C Ss than will B type male Es.
  - A2. A type female Es will exert greater expectancy effects with low S-C Ss than will B type female Es.
- 
- B1. B type male Es will exert greater expectancy effects with high S-C Ss than will A type male Es.
  - B2. B type female Es will exert greater expectancy effects with high S-C Ss than will A type female Es.

Voice Quality Hypotheses

- A3. Judges will rate the taped voices of both male and female A type Es higher than their B type counterparts in sophistication, self-confidence, professionalism, warmth-friendliness, and enthusiasm, when reading instructions to low S-C Ss.
- A4. Judges will rate the taped voices of both male and female A type Es lower than their B type counterparts in discomfort and coldness-distance when reading instructions to low S-C Ss.
- A5. Judges will rate A type male Es higher than B type male Es in masculinity and dominance when reading instructions to low S-C Ss.
- A6. Judges will rate the taped voices of female A type Es higher than female B type Es in femininity, kindness, and softness when reading instructions to low S-C Ss.
- A7. Judges will rate the taped voices of female A type Es lower than female B type Es in dominance when reading instructions to low S-C Ss.
- 
- B3. Judges will rate the taped voices of both male and female B type Es higher than their A type counterparts in sophistication, self-confidence, professionalism, warmth-friendliness, and enthusiasm, when reading instructions to high S-C Ss.
- B4. Judges will rate the taped voices of both male and

female B type Es lower than their A type counterparts in discomfort and coldness-distance when reading instructions to high S-C Ss.

B5. Judges will rate B type male Es higher than A type male Es in masculinity and dominance when reading instructions to high S-C Es.

B6. Judges will rate the taped voices of female B type Es higher than female A type Es in femininity, kindness, and softness when reading instructions to high S-C Ss.

B7. Judges will rate the taped voices of female B type Es lower than female A type Es in dominance when reading instructions to high S-C Ss.

#### Interpersonal Impressions Hypotheses

A8. Low S-C Ss will rate themselves as liking more, and feeling more comfortable with both male and female A type Es than with both male and female B type Es. They will also rate the A type Es as more friendly and more self-confident.

A9. Low S-C Ss will rate male A type Es as more dominant than B type male Es.

A10. Low S-C Ss will rate female A type Es as more gentle and kind than female B type Ss.

All. Both male and female A type Es will rate themselves as liking more, and being more comfortable with low S-C Ss. They will also rate these patients as more at ease, cooperative, and involved in the task.

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B8. High S-C Ss will rate themselves as liking more and feeling more comfortable with both male and female B type Es than with both male and female A type Es. They will also rate the B type Es as more friendly and self-confident.

B9. High S-C Ss will rate male B type Es as more dominant than A type male Es.

B10. High S-C Ss will rate female type Es as more gentle and kind than female B type Es.

B11. Both male and female B type Es will rate themselves as liking more, and being more comfortable with high S-C Es. They will also rate these patients as more at ease, cooperative, and involved in the task.

## METHODOLOGY

### Subjects

Aids: Thirty-item A-B questionnaires consisting of the 23-item Whitehorn and Betz scale (Whitehorn and Betz, 1960) plus seven of the eight MMPI items added by Kemp in his version of the A-B scale (Kemp and Stephens, 1971) were distributed to all available Florida Northeast State Hospital aids working the day shift. Of 110 questionnaires given out, eighty-six were returned in usable form. A total of fifty-three women and thirty-three men returned the questionnaires. Questionnaires were scored for A responses; i.e., high scores indicate a high number of A responses. Total female scores ranged from 6 to 25, with a median score of 14.5. Male aids' scores ranged from 7-19, with a median score of 12.

In order to control for effects of race in the aid-patient interaction, only white aids were used for the study. Scores for the 36 white female aids ranged from 6 to 23, with a median score of 15. Scores for the 17 white males ranged from 7 to 19, with a median score of 11.

The four highest and four lowest scorers among both the female and male groups agreed to participate in the

study. Females designated As had scores of 23, 22, 22, and 22. Female Bs had scores of 6, 8, 9, and 9. Males designated As had scores of 19, 18, 14, and 14. Males designated Bs had scores of 7, 8, 8, and 11.

Female As had an average of 5 years and 10 months' experience as aids, with a range of from 1 year to 12 years, 5 months' experience. Their ages were 42, 29, 35, and 25. Female Bs averaged 6 years' experience, with a range of from 4 years and five months to 9 years' experience. Their ages were 40, 35, 26, and 28.

Male As averaged 2 years and 4 months' experience, with a range of from 8 months to 6 years and 3 months' experience as aids. Their ages were 45, 52, 24, and 23. Male Bs had an average of 2 years and 5 months' experience with a range of from 8 months to 4 years and 6 months' experience. Their ages were 52, 48, 25, and 29.

Patients: One hundred-twenty-four male inpatients diagnosed upon last admission by the staff of the Northeast Florida State Hospital as schizophrenic were used as patient-subjects. Subcategories of schizophrenia such as catatonic, simple, etc., were ignored for purposes of this study. Patients with organic complications or severe mental deficiency were excluded. Sixty-six of the patients were white and fifty-eight were black.

Patients were classified as of relatively higher or

relatively lower social competence with regard to the total sample on the criteria established by Zigler and Phillips (1960). Social competence is defined in terms of six objective biographical variables. These are age, intelligence, educational level, occupational level, employment history, and marital status. The categories of each variable and their order from low to high are presented below.

1. Age--24 and below, 25-44, and 45 years and above.
- 2.\* Intelligence--I.Q.s obtained on a standard intelligence test of 84 or less, 85-115, and 116 and above.
3. Education--none or some grades including ungraded or special classes or finished grade school; some high school or finished high school; and some college or more.
4. Occupation--The Dictionary of Occupational Titles (United States Government Printing Office, 1965) was employed to place each occupation into the categories of unskilled and semiskilled; skilled, service, clerical, and sales; and professional and managerial.
5. Employment history--usually unemployed; seasonal, fluctuating, frequent shifts, part-time employment; and regularly employed.

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\*This variable was not used in the classification schema of the present study. See text for explanation.

6. Marital status--single; separated, divorced, remarried, and widowed; and single continuous marriage (Phillips and Zigler, 1963, p. 138).

By means of a search of the files of 13 male wards at the hospital, 175 potential patient-subjects were chosen. The number selected from each ward ranged from 2 to 24 patients. Data from the patient files was insufficient in the majority of cases to establish a social competency score for the patient, thus necessitating an interview with individual patients to gain supplementary social history data. In no case was intelligence included as a social competence variable because I.Q. scores were not available.

For any of the indices, placement in the lowest category resulted in a score of 0 for that index. Assignment to the middle category resulted in a score of 1, and placement in the highest category resulted in a score of 2. The overall social competence score for each patient was the mean of the scores obtained on the individual indices. This averaging procedure was necessary because data were not available for every patient on all six variables. Thus the final social competence score for any individual could range from 0 to 2.

The median social competency score for the 124 patients actually used in the study fell between .6 and .8. For purposes of the research a score of .6 or lower was designated as a low social competence score. This resulted in a



total of 66 high social competence patients and 58 low social competence patients.

Scores for the total 124 patients ranged from a low of .2 to a high of 1.8, with a mean of .723, and a standard deviation of .12. Whites comprised 62% of the high social competence patients and 42% of the low social competence patients. Ages of the patients ranged from 19 to 69, with a mean age of 42.67. The diagnosis of schizophrenic, chronic undifferentiated type, had been given to 46.8% of the patients. The remainder carried diagnoses of paranoid type, simple type, childhood type, catatonic type, hebephrenic type, or schizo-affective type.

### Instruments

Instruments used in the experiment were a 30-item A-B questionnaire administered to the aids; written instructions to the aids as to how to administer the picture-rating task; score sheets for the picture rating task; standardized instructions read by the aids to the patients as to how to rate the photographs; a tape recorder; a rating scale shown by the aids to the patients as a visual aid in making judgments in the picture rating task; five-point Likert-type rating scales covering five qualities on which the aids rated their impressions of the patients; five-point Likert-type rating scales covering six qualities on which the

patients rated their impressions of the aids; and score sheets used to rate voice quality.

The 30-item A-B questionnaire given the aids was the Kemp (Kemp and Stephens, 1971) version of the A-B scale, less one item, discarded because it was thought the content of the item (e.g., I have had no difficulty in starting or holding my bowel movement) might unnecessarily arouse hostility or suspicion. Kemp's A-B questionnaire consists of the 23 items of the original White horn and Betz (1960) scale plus 8 items from the MMPI found to correlate highly with those items. The questionnaire is shown in Appendix A.

Within the 30 items of the questionnaire were the 23 SVIB items of the Whitehorn and Betz (1960) scale, and the 23 items of the Schiffman, Carson, and Falkenberg (Kemp and Stephens, 1971) modification of the Kemp version, which is more internally consistent than either of the other two scales. Answers were scored according to these (Whitehorn and Betz, 1960; Schiffman, Carson, and Falkenberg) versions of the A-B scale as well as to the total 30-item scale, with the finding that the 16 aids used in the study maintained the same rank order regardless of which scoring system was used.

Standardized instructions were read to each aid prior to the aid's administering the picture rating task. These instructions are in Appendix B.

Standardized instructions were read by the aids to the

patients in administering the picture rating task. These instructions are in Appendix C. In addition, a rating scale was shown to each patient by the aid in order to help the patient understand the instructions. The rating scale is shown in Appendix D.

Ten standardized photographs of male and female faces used in the picture rating task were provided courtesy of Dr. Robert Rosenthal, Harvard University.

Each aid and each patient were provided a sheet containing questions, in Likert rating-scale form, on which they were instructed to rate their impressions of their partner in the picture rating task. These are shown in Appendices E and F.

A sample of the score sheets used by undergraduate judges in rating the audiotape of aids' voices when reading the picture rating task instructions to patients is shown in Appendix G.

### Procedure

The heart of the experimental procedure was the Rosenthal (1966) picture rating task, a task originally designed to measure the effect of covert experimenter bias on experiment outcome. The task in the present study involved each aid (E) presenting to each of eight patients\* seen consecutively a

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\*One female A and one male A saw only seven patients each.  
One male B saw only six patients.

standardized series of ten photographs of male and female faces. (Rosenthal, 1966) Each E read a standardized set of instructions to each S, asking him to rate each photograph on the apparent success or failure that the person pictured had been experiencing. Each S was asked to say where on a scale running from +10 (extreme success) to -10 (extreme failure) each person pictured would fall. The aid scored the patient's responses.

Expectancies were established by means of the instructions read to the Es, and by the author telling the E immediately prior to the E's meeting each patient that the patient was one of two basic personality types, and would therefore average +5 or -5 on his photo ratings. It was made clear to the Es that the Ss had never taken the picture rating task before, but that previously administered personality tests indicated that they would probably score in the predicted direction. Approximately half of the eight Ss seen by each E were randomly assigned to the +5 expectancy group and half to the -5 expectancy group. Without experimenter expectancy being established, Ss should in fact produce a mean score of zero in rating the pictures. (Rosenthal, 1966)

Each aid was brought into an interview room and was given the instructions for the picture rating task (see Appendix B) and familiarized with the procedure which would follow and the various instruments needed to carry out the

experiment. The aid was told that "we" were in the process of developing a test of how well a person can judge the success or failure of another person, and advised that the author would tell him what scores to expect from each patient just prior to his meeting the patient.

Patients in groups of from eight to twelve members, from a ward other than the one on which the aid worked, were brought to a waiting room and told that they would meet an aid who was going to show them some pictures and have them rate them. They were assured that the task was not difficult and would take very little time to complete.

After introducing each patient to the aid in the interview room, the author left the room and waited outside. The aid turned on a tape recorder and read the instructions to the patient. After completing the picture rating task, each patient was escorted by the author to a third room where he was asked to respond to the questionnaire concerning his impressions of the aid who had shown him the photographs. Then the patient was asked for any relevant social history information not included in his file. Meanwhile the aid filled out a questionnaire concerning his impressions of the patient. This procedure was followed until the aid saw eight patients who were willing to cooperate and able to follow the relevant instructions.

The author did not know which patients would be classified as high social competence or low social competence

patients prior to introducing them to the aid. Post-experimental analysis showed that female As saw 15 low social competence and 16 high social competence patients. Female Bs saw 16 high and 14 low social competence patients. Male As saw 16 high competence and 15 low competence patients, and male Bs saw 18 high competence and 13 low competence patients.

Later undergraduate psychology students were recruited to rate voice qualities of the aids. The five male and three female undergraduates who served as judges of voice quality heard audiotapes of each aid reading the instructions once under each of four conditions: reading to a low social competence patient with an established expectancy of +5; reading to a low social competence patient with a -5 expectancy; reading to a high social competence patient with a +5 expectancy; and reading to a high competence patient with a -5 expectancy. These four reading were randomly sampled from each E's eight Ss.

Judges were given a booklet of rating sheets on which to rate each voice heard. The twelve qualities were varied in order of presentation for each voice heard in order to minimize rating bias. Judges were not given any definitions of the twelve vocal qualities they were required to rate.

### Statistical Treatment

The results of each hypothesis were tested for significance by one tailed t-tests for independent samples. The significance level for these t-tests was set at .05.

Hypotheses A1, A2, B1, and B2 predict differential experimenter expectancy effects produced under four separate experimental conditions. In order to simplify computation of the picture rating task data upon which these hypotheses rest, a score of 10 was assigned to a patient who averaged 0 on the task. A score in the direction of induced expectancy was added to 10, and a score in the direction opposite of induced expectancy was subtracted from 10. For example, if a patient for whom a +5 expectancy was given scored a mean of +2.7 on the ten pictures, his score was converted for computational purposes to 12.7. If a patient scored a mean of -2.7 on the ten pictures, his score was converted to 7.3. Thus there were no negative scores with which to work.

The data related to the series of hypotheses A3-A7 and B3-B7, dealing with effects of E and S pairings on the voice quality of Es, was generated by judges listening to and rating audiotapes on a five point Likert-type scale. Analysis of inter-rater reliability was accomplished by Ebel's formula for interclass correlation, which yields essentially an average intercorrelation of ratings from  $n$  raters.

## RESULTS

### Experimenter Expectancy Hypotheses

Hypothesis A1 predicted that A type male Es would exert greater expectancy effects with low S-C Ss than would B type male Es. Analysis shows there is no statistically significant difference between the mean scores obtained from low S-C Ss by A and B male aids. Hypothesis A2 predicted a greater expectancy effect would be exerted on low S-C Ss by A type female Es than by B type female Es. This hypothesis was not supported by the data. Although As more effectively biased low S-C Ss than did Bs, this relationship was not statistically significant. Results are summarized in Table 1.

In a comparison of means not required by the hypotheses, it was found that female As exerted greater expectancy effects with low S-C Ss than did male Bs. Mean expectancy scores for low S-C Ss were 10.98 with female As serving as Es, and 8.77 with male Bs, with a standard deviation of 3.23, and a t-score of 1.80 ( $p < .05$ ).

Hypotheses B1 and B2 predicted that male B type Es and female B type Es, respectively, would exert greater expectancy effects on high S-C Ss than would their A type



counterparts. Both hypotheses were supported by the data. Results are summarized in Table 1.

Additional analysis shows that there were no main effects of social competence level, experimenter type, or experimenter sex on expectancy scores (Table 2).

Thus the interaction effect with regard to experimenter expectancy did not take place fully as predicted, in that As were not found to be significantly more effective than their B counterparts in influencing the ratings of high S-C Ss. The interaction effect was partially confirmed however, in that B aids of both sexes were more effective than their A counterparts in influencing the ratings of high S-C Ss.

TABLE 1

COMPARISON OF MALE As vs. MALE Bs, AND FEMALE As vs. FEMALE Bs ON EXPERIMENTER EXPECTANCY SCORES ATTAINED WITH HIGH AND LOW SOCIAL COMPETENCE SCHIZOPHRENICS

Low S-C Ss				. High S-C Ss			
	Mean	S.D.	t		Mean	S.D.	t
Male A							
type Es	9.46				9.09		
		2.72	.68 N.S.			2.84	1.86*
Male B							
type Es	8.77				10.92		
<hr/>							
Female A							
type Es	10.98				8.69		
		3.24	.15 N.S.			3.44	1.75*
Female B							
type Es	10.80				10.82		

\* $p < .05$

TABLE 2

COMPARISON OF A TYPE Es vs. B TYPE Es; MALE Es vs. FEMALE Es; AND HIGH vs. LOW SOCIAL COMPETENCE SCHIZOPHRENICS ON EXPERIMENTER EXPECTANCY SCORES ATTAINED

	Mean	S.D.	t
A type Es	9.53	3.17	1.52 N.S.
B type Es	10.41		
Male Es	9.64	3.14	1.15 N.S.
Female Es	10.30		
Low S-C Ss	10.03	3.15	.14 N.S.
High S-C Ss	9.91		

### Voice Quality Hypotheses

Ebel's formula for inter-rater reliability (Guilford, 1954) yielded an average  $r$  of .31 with a range of from .20 to .36 for each voice quality x aid type x patient type condition. This low inter-rater reliability renders any findings regarding the various voice quality hypotheses of doubtful validity. The following results, which are summarized in Tables 3, 4, 5, and 6, are reported with this caveat in mind.

Hypothesis A3 predicted that judges would rate the taped voices of both male and female A type Es higher than their B type counterparts in sophistication, self-confidence, professionalism, warmth-friendliness, and enthusiasm, when reading instructions to low S-C Ss. None of the components of this hypothesis was confirmed with one exception: voices of male type As were judged to have significantly more enthusiasm than those of male type Bs in reading the instructions to the picture rating task to low S-C Ss. There were no significant differences found between the voices of female As and Bs when paired with low S-C Ss. (Tables 3 and 4)

Hypothesis A4 predicted that judges would rate both male and female A type Es lower than their B type counterparts in the voice qualities of discomfort and coldness-distance when reading to low S-C Ss. Only one of the four

components of this hypothesis was confirmed: Judges rated female Bs significantly higher in discomfort than female As when paired with low S-C Ss. (Table 4)

The predictions of hypothesis A5 were not upheld by the data. Judges did not rate A type male Es higher than B type male Es in masculinity and dominance when reading to low S-C Ss. (Table 3)

Hypothesis A6 was concerned with female As and Bs. The predictions were that taped voices of As would be rated higher than those of Bs in the qualities of femininity, kindness, and softness when reading instructions to low S-C Ss. This hypothesis was not confirmed by the data. (Table 4)

The last voice quality hypothesis dealing with instructions read to low S-C Ss predicted that with these Ss the voices of female As would be rated lower in dominance than those of female Bs. The data did not support this hypothesis. (Table 4)

Hypotheses B3-B7 were concerned with the effect on judge's rating of the pairings of As and Bs with high S-C Ss.

Hypothesis B3 predicted that judges would rate the taped voices of both male and female B type Es higher than their A type counterparts in sophistication, self-confidence, professionalism, warmth-friendliness, and enthusiasm, when reading instructions to high S-C Ss. The data did not support this hypothesis. In the only statistically significant

finding, voices of male As were rated higher in professionalism than male Bs when reading to high S-C Ss. This results is opposite to that predicted. (Tables 5 and 6)

Hypotheses B4-B7 all failed to be confirmed by the data. Hypothesis B4 predicted that voices of both male and female Bs would be rated lower than those of As in discomfort and coldness-distance when reading instructions to high S-C Ss. Hypothesis B5 predicted that voices of male Bs would be rated higher than those of male As in masculinity and dominance when reading to high S-C Ss. Hypothesis B6 predicted that in this condition voices of female Bs would be rated higher than those of female As in femininity, kindness, and softness. The final hypothesis of this series predicted that judges would rate the taped voices of female Bs lower than female As in dominance when reading to high S-C ss. (Tables 5 and 6)

In summary, there was little confirmation of the voice quality hypothesis. Of forty comparisons of means, only three t-tests indicated significant results. One of these results was in the direction opposite that predicted by the hypothesis. Low inter-rater reliability places the value of these results in question.

TABLE 3

COMPARISON OF MALE As vs. MALE Bs ON RATED VOICE QUALITIES  
WHEN READING INSTRUCTIONS TO LOW S-C Ss

		Mean	S.D.	t
Sophistication	Male As	1.10	1.13	1.21 N.S.
	Male Bs	.76		
Self-Confidence	Male As	1.65	1.14	.61 N.S.
	Male Bs	1.48		
Professionalness	Male As	1.39	1.28	1.27 N.S.
	Male Bs	.97		
Warmth-Friendliness	Male As	1.52	1.19	.72 N.S.
	Male Bs	1.29		
Enthusiasm	Male As	1.47	1.0	2.08*
	Male Bs	.97		
Discomfort	Male As	1.67	1.18	.79 N.S.
	Male Bs	1.89		
Coldness-Distance	Male As	2.16	1.21	.91 N.S.
	Male Bs	2.45		
Masculinity	Male As	2.39	1.45	1.17 N.S.
	Male Bs	1.93		
Dominance	Male As	2.31	1.52	.76 N.S.
	Male Bs	2.02		

\* $p < .025$

TABLE 4

COMPARISON OF FEMALE As vs. FEMALE Bs ON RATED VOICE QUALITIES  
WHEN READING INSTRUCTIONS TO LOW S-C Ss

		Mean	S.D.	t
Sophistication	Female As	1.53	1.36	.22 N.S.
	Female Bs	1.41		
Self-Confidence	Female As	1.90	1.13	.50 N.S.
	Female Bs	1.76		
Professionalness	Female As	1.80	1.30	.45 N.S.
	Female Bs	1.65		
Warmth-Friendliness	Female As	2.11	.94	.80 N.S.
	Female Bs	2.31		
Enthusiasm	Female As	1.50	1.15	.46 N.S.
	Female Bs	1.62		
Discomfort	Female As	1.23	.93	1.77*
	Female Bs	1.62		
Coldness-Distance	Female As	1.80	1.13	1.17 N.S.
	Female Bs	1.47		
Dominance	Female As	1.49	1.08	.19 N.S.
	Female Bs	1.44		
Femininity	Female As	2.39	1.37	.06 N.S.
	Female Bs	2.41		
Kindness	Female As	2.23	.95	.33 N.S.
	Female Bs	2.15		
Softness	Female As	2.07	1.13	.07 N.S.
	Female Bs	2.09		

\* $p < .05$



TABLE 5

COMPARISON OF MALE As vs. MALE Bs ON RATED VOICE QUALITIES  
WHEN READING INSTRUCTIONS TO HIGH S-C Ss

		Mean	S.D.	t
Sophistication	Male As	1.20	1.05	.73 N.S.
	Male Bs	1.01		
Self-Confidence	Male As	1.96	1.24	.46 N.S.
	Male Bs	1.84		
Professionalness	Male As	1.43	1.10	2.70*
	Male Bs	1.90		
Warmth-Friendliness	Male As	1.70	1.23	.73 N.S.
	Male Bs	1.51		
Enthusiasm	Male As	1.74	.95	.10 N.S.
	Male Bs	1.76		
Discomfort	Male As	1.68	.90	.85 N.S.
	Male Bs	1.51		
Coldness-Distance	Male As	1.91	1.32	.64 N.S.
	Male Bs	2.19		
Masculinity	Male As	2.20	1.30	.18 N.S.
	Male Bs	2.25		
Dominance	Male As	1.87	1.22	.75 N.S.
	Male Bs	2.05		

\*p< .005

TABLE 6  
COMPARISON OF FEMALE As vs. FEMALE Bs ON RATED VOICE QUALITIES  
WHEN READING INSTRUCTIONS TO HIGH S-C Ss

		Mean	S.D.	t
Sophisticated	Female As	1.24	1.30	.47 N.S.
	Female Bs	1.38		
Self-Confidence	Female As	1.38	1.30	.20 N.S.
	Female Bs	1.44		
Professionalness	Female As	1.64	1.44	
	Female As	1.64		
Warmth-Friendliness	Female As	2.19	1.30	.10 N.S.
	Female Bs	2.16		
Enthusiasm	Female As	1.48	.88	.05 N.S.
	Female Bs	1.48		
Discomfort	Female As	1.76	1.22	.15 N.S.
	Female Bs	1.62		
Coldness-Distance	Female As	2.04	1.28	.36 N.S.
	Female Bs	1.94		
Dominance	Female As	1.44	1.30	.23 N.S.
	Female Bs	1.51		
Femininity	Female As	2.38	2.07	.21 N.S.
	Female Bs	2.28		
Kindness	Female As	1.99	1.43	.58 N.S.
	Female Bs	1.80		
Softness	Female As	1.97	1.23	.31 N.S.
	Female Bs	2.05		

### Interpersonal Impressions Hypotheses

This series of hypotheses dealt with the impressions Es and Ss formed of each other during their brief interactions. It was hypothesized that different pairings would produce different ratings as predicted by the interaction hypothesis.

Hypotheses A8-A10 dealt with the ratings made by low S-C Ss of their own impressions of the A and B type Es who administered the picture rating task. Results are summarized in Tables 7-12.

The prediction made by hypothesis A8 was that low S-C Ss would rate themselves as liking more, and feeling more comfortable with both male and female As, and that they would rate both male and female As more friendly and self-confident than their B counterparts. Statistical analysis confirms one component of this hypothesis: Low S-C Ss did rate themselves as liking female As more than female Bs. (Table 7) An additional and unexpected finding was that both male and female Bs were rated as more self-confident than As. (Table 10) This finding was opposite to that predicted. Hypotheses A9 and A10 were not confirmed. They predicted that low S-C Ss would rate male As as more dominant than male Bs, and female As as more gentle and kind than female Bs.

Hypothesis A11 predicted that both male and female As would rate themselves as liking more and being more comfortable

with low S-C Ss, and that they would rate these Ss as more at ease, cooperative, and involved in the picture rating task. This hypothesis was not supported by the data.

Results are summarized in Tables 13-17.

Hypotheses B8-B10 were concerned with the ratings made by high S-C Ss of their impressions of A and B type Es. Results are summarized in Tables 18-23.

According to hypothesis B8, high S-C Ss would rate themselves as liking more and feeling more comfortable with both male and female Bs than with their A counterparts, and they would also rate male and female Bs as more friendly and self-confident. This hypothesis was not confirmed by the data. Contrary to expectation, high S-C Ss rated themselves as liking A type female more than B type females. (Table 18)

Hypotheses B9 and B10 predicted that high S-C Ss would rate male Bs as more dominant than male As, and female Bs more gentle and kind than female As. Neither hypothesis was confirmed by the data.

Hypothesis B11 predicted that both male and female Bs would rate themselves as liking more and being more comfortable with high S-C Ss, and that they would also rate these Ss as more at ease, cooperative, and involved in the picture rating task. Results of statistical analysis indicate that male Bs did rate themselves as liking high S-C Ss more than low S-C Ss, and that they saw high S-C Ss as more cooperative in the

experimental session (Tables 24 and 27). Both results are as predicted. The other predictions of Hypothesis B11 were not confirmed by the data (See Tables 24-28).

In summary, of forty comparisons of means undertaken to test the series of hypotheses concerning interpersonal impressions formed by Es and Ss, four were significant in the predicted direction, and three were statistically significant in the direction opposite that predicted. The findings were essentially threefold: 1) Female As were liked better by both high and low S-C Ss than were female Bs. 2) Low S-C Ss rated As of both sexes less self-confident than their B counterparts. 3) Male Bs liked high S-C Ss more than they liked low S-C Ss, and saw high S-C Ss as more cooperative during the picture rating task administration.

TABLE 7

COMPARISON OF MALE As vs. MALE Bs, AND FEMALE As vs. FEMALE Bs ON RATINGS MADE BY LOW SOCIAL COMPETENCE SCHIZOPHRENICS ON THE QUESTION "DID YOU LIKE THE AID?"<sup>1</sup>

	Mean	S.D.	t
Male A type Es	3.2	1.18	.44 N.S.
Male B type Es	3.0		
Female A type Es	3.53	.93	1.91*
Female B type Es	2.86		

<sup>1</sup>Ratings were made on a five-point Likert-type scale ranging from 0 (Not at all) to 4 (A lot).

\*p < .05

TABLE 8

COMPARISON OF MALE Ss vs. MALE Bs, AND FEMALE As vs. FEMALE Bs ON RATINGS MADE BY LOW SOCIAL COMPETENCE SCHIZOPHRENICS ON THE QUESTION "DID YOU FEEL AT EASE WITH THE AID?"<sup>1</sup>

	Mean	S.D.	t
Male A type Es	2.73		
Male B type Es	2.54	1.42	.68 N.S.
Female A type Es	3.2		
Female B type Es	3.14	1.16	.33 N.S.

TABLE 9

COMPARISON OF MALE As vs. MALE Bs, AND FEMALE As vs. FEMALE Bs ON RATINGS MADE BY LOW SOCIAL COMPETENCE SCHIZOPHRENICS ON THE QUESTION "WAS THE AID FRIENDLY?"<sup>1</sup>

	Mean	S.D.	t
Male A type Es	3.06		
Male B type Es	3.15	1.11	1.0 N.S.
Female A type Es	3.47		
Female B type Es	3.57	.64	.42 N.S.

<sup>1</sup>Ratings were made on a five point Likert-type scale ranging from 0 (Not at all) to 4 (A lot).

TABLE 10

COMPARISON OF MALE As vs. MALE Bs, AND FEMALE As vs. FEMALE Bs ON RATINGS MADE BY LOW SOCIAL COMPETENCE SCHIZOPHRENICS ON THE QUESTION "WAS THE AID SELF-CONFIDENT?"<sup>1</sup>

	Mean	S.D.	t
Male A type Es	2.67	1.10	1.69*
Male B type Es	3.38		
Female A type Es	2.6	.96	2.5**
Female B type Es	3.57		

\*p < .05

\*\*p < .005

TABLE 11

COMPARISON OF MALE As vs. MALE Bs ON RATINGS MADE BY LOW SOCIAL COMPETENCE SCHIZOPHRENICS ON THE QUESTION "WAS THE AID A STRONG, DOMINANT PERSON?"<sup>1</sup>

	Mean	S.D.	t
Male A type Es	2.93	1.08	1.10 N.S.
Male B type Es	3.38		

<sup>1</sup> Ratings were made on a five point Likert-type scale ranging from 0 (Not at all) to 4 (A lot).

TABLE 12

COMPARISON OF FEMALE As vs. FEMALE Bs ON RATINGS MADE BY LOW SOCIAL COMPETENCE SCHIZOPHRENICS ON THE QUESTION "WAS THE AID A GENTLE, KIND PERSON?"<sup>1</sup>

	Mean	S.D.	t
Female A type Es	3.07	1.09	
Female B type Es	3.07		

TABLE 13

COMPARISON OF LOW SOCIAL COMPETENCE SCHIZOPHRENICS vs. HIGH SOCIAL COMPETENCE SCHIZOPHRENICS ON RATINGS MADE BY MALE AND FEMALE As ON THE QUESTION "DID YOU LIKE THIS PATIENT?"<sup>1</sup>

	Male As Mean	S.D.	t
Low S-C Ss	3.33	.64	.42 N.S.
High S-C Ss	3.43		
	Female As Mean	S.D.	t
Low S-C Ss	2.93	.83	1.07 N.S.
High S-C Ss	3.25		

<sup>1</sup>Ratings were made on a five point Likert-type scale ranging from 0 (Not at all) to 4 (A lot).



TABLE 14

COMPARISON OF LOW SOCIAL COMPETENCE SCHIZOPHRENICS vs. HIGH SOCIAL COMPETENCE SCHIZOPHRENICS ON RATINGS MADE BY MALE AND FEMALE As ON THE QUESTION "DID YOU FEEL AT EASE WITH THIS PATIENT?"<sup>1</sup>

Male As			
	Mean	S.D.	t
Low S-C Ss	3.67		
High S-C Ss	3.5	.64	.42 N.S.
Female As			
	Mean	S.D.	t
Low S-C Ss	3.33		
High S-C Ss	3.57	.68	1.0 N.S.

TABLE 15

COMPARISON OF LOW SOCIAL COMPETENCE SCHIZOPHRENICS vs. HIGH SOCIAL COMPETENCE SCHIZOPHRENICS ON RATINGS MADE BY MALE AND FEMALE As ON THE QUESTION "DID YOUR PATIENT FEEL AT EASE?"<sup>1</sup>

Male As			
	Mean	S.D.	t
Low S-C Ss	2.13		
High S-C Ss	3.00	.62	.77 N.S.
Female As			
	Mean	S.D.	t
Low S-C Ss	3.47		
High S-C Ss	3.25	.68	1.0 N.S.

<sup>1</sup>Ratings were made on a five point Likert-type scale ranging from 0 (Not at all) to 4 (A lot).

TABLE 16

COMPARISON OF LOW SOCIAL-COMPETENCE SCHIZOPHRENICS vs. HIGH SOCIAL-COMPETENCE SCHIZOPHRENICS ON RATINGS MADE BY MALE AND FEMALE As ON THE QUESTION "DID THE PATIENT COOPERATE?"<sup>1</sup>

	<u>Male As</u>		
	Mean	S.D.	t
Low S-C Ss	2.92	1.24	.16 N.S.
High S-C Ss	3.0		
	<u>Female As</u>		
	Mean	S.D.	t
Low S-C Ss	3.4	.66	1.41 N.S.
High S-C Ss	3.06		

TABLE 17

COMPARISON OF LOW SOCIAL-COMPETENCE SCHIZOPHRENICS vs. HIGH SOCIAL-COMPETENCE SCHIZOPHRENICS ON RATINGS MADE BY MALE AND FEMALE As ON THE QUESTION "DID THE PATIENT SHOW INTEREST IN RATING THE PHOTOS?"<sup>1</sup>

	<u>Male As</u>		
	Mean	S.D.	t
Low S-C Ss	2.6	1.33	.21 N.S.
High S-C Ss	2.5		
	<u>Female As</u>		
	Mean	S.D.	t
Low S-C Ss	3.2	1.37	1.31 N.S.
High S-C Ss	2.56		

<sup>1</sup>Ratings were made on a five point Likert-type scale ranging from 0 (Not at all) to 4 (A lot).

TABLE 18

COMPARISON OF MALE As vs. MALE Bs, AND FEMALE As vs. FEMALE Bs ON RATINGS MADE BY HIGH SOCIAL COMPETENCE SCHIZOPHRENICS ON THE QUESTION "DID YOU LIKE THE AID?"<sup>1</sup>

	Mean	S.D.	t
Male A type Es	3.38		
Male B type Es	2.78	1.31	1.3 N.S.
Female A type Es	3.0	.86	1.86*
Female B type Es	2.44		

\*p < .05

TABLE 19

COMPARISON OF MALE As vs. MALE Bs, AND FEMALE As vs. FEMALE Bs ON RATINGS MADE BY HIGH SOCIAL COMPETENCE SCHIZOPHRENICS ON THE QUESTION "DID YOU FEEL AT EASE WITH THE AID?"<sup>1</sup>

	Mean	S.D.	t
Male A type Es	3.13		
Male B type Es	2.56	1.52	1.08 N.S.
Female A type Es	2.75		
Female B type Es	3.06	1.24	1.63 N.S.

<sup>1</sup>Ratings were made on a five point Likert-type scale ranging from 0 (Not at all) to 4 (A lot).

TABLE 20

COMPARISON OF MALE As vs. MALE Bs, AND FEMALE As vs. FEMALE Bs ON RATINGS MADE BY HIGH SOCIAL-COMPETENCE SCHIZOPHRENICS ON THE QUESTION "WAS THE AID FRIENDLY?"<sup>1</sup>

	Mean	S.D.	t
Male A type Es	3.31	1.31	.43 N.S.
Male B type Es	3.11		
Female A type Es	3.44	.73	.23 N.S.
Female B type Es	3.38		

TABLE 21

COMPARISON OF MALE As vs. MALE Bs, AND FEMALE As vs. FEMALE Bs ON RATINGS MADE BY HIGH SOCIAL-COMPETENCE SCHIZOPHRENICS ON THE QUESTION "WAS THE AID SELF-CONFIDENT?"<sup>1</sup>

	Mean	S.D.	t
Male A type Es	3.31	1.31	.43 N.S.
Male B type Es	3.11		
Female A type Es	3.13	.91	.38 N.S.
Female B type Es	3.25		

<sup>1</sup>Ratings were made on a five point Likert-type scale ranging from 0 (Not at all) to 4 (A lot).

TABLE 22

COMPARISON OF MALE As vs. MALE Bs ON RATINGS BY HIGH SOCIAL COMPETENCE SCHIZOPHRENICS ON THE QUESTION "WAS THE AID A STRONG, DOMINANT PERSON?"<sup>1</sup>

	Mean	S.D.	t
Male A type Es	3.0		
Male B type Es	2.78	1.57	.71 N.S.

TABLE 23

COMPARISON OF FEMALE As vs. FEMALE Bs ON RATINGS MADE BY HIGH SOCIAL COMPETENCE SCHIZOPHRENICS ON THE QUESTION "WAS THE AID A GENTLE, KIND PERSON?"<sup>1</sup>

	Mean	S.D.	t
Female A type Es	3.31		
Female B type Es	3.31	.87	

<sup>1</sup>Ratings were made on a five point Likert-type scale ranging from 0 (Not at all) to 4 (A lot).

TABLE 24

COMPARISON OF LOW SOCIAL-COMPETENCE SCHIZOPHRENICS vs. HIGH SOCIAL-COMPETENCE SCHIZOPHRENICS ON RATINGS MADE BY MALE AND FEMALE Bs ON THE QUESTION "DID YOU LIKE THIS PATIENT?"<sup>1</sup>

Male Bs			
	Mean	S.D.	t
Low S-C Ss	2.38	.96	2.08*
High S-C Ss	3.11		
*p<.05			
Female Bs			
Low S-C Ss	2.36	.83	.27 N.S.
High S-C Ss	2.44		

TABLE 25

COMPARISON OF LOW SOCIAL-COMPETENCE SCHIZOPHRENICS vs. HIGH SOCIAL-COMPETENCE SCHIZOPHRENICS ON RATINGS MADE BY MALE AND FEMALE Bs ON THE QUESTION "DID YOU FEEL AT EASE WITH THIS PATIENT?"<sup>1</sup>

		Male Bs	
	Mean	S.D.	t
Low S-C Ss	2.77	.88	1.93 N.S.
High S-C Ss	3.39		
		Female Bs	
Low S-C Ss	2.64	1.03	.44 N.S.
High S-C Ss	2.81		

<sup>1</sup>Ratings were made on a five point Likert-type scale ranging from 0 (Not at all) to 4 (A lot).

\*p<.05

TABLE 26

COMPARISON OF LOW SOCIAL-COMPETENCE SCHIZOPHRENICS vs. HIGH SOCIAL-COMPETENCE SCHIZOPHRENICS ON RATINGS MADE BY MALE AND FEMALE Bs ON THE QUESTION "DID THE PATIENT FEEL AT EASE?"<sup>1</sup>

Male Bs			
	Mean	S.D.	t
Low S-C Ss	2.08	1.17	1.0 N.S.
High S-C Ss	2.50		
Female Bs			
	Mean	S.D.	t
Low S-C Ss	2.29	.85	1.25 N.S.
High S-C Ss	2.69		

TABLE 27

COMPARISON OF LOW SOCIAL-COMPETENCE SCHIZOPHRENICS vs. HIGH SOCIAL-COMPETENCE SCHIZOPHRENICS ON RATINGS MADE BY MALE AND FEMALE Bs ON THE QUESTION "DID THE PATIENT COOPERATE?"<sup>1</sup>

Male Bs			
	Mean	S.D.	t
Low S-C Ss	2.77	1.03	2.14*
High S-C Ss	3.56		

<sup>1</sup>Ratings were made on a five point Likert-type scale ranging from 0 (Not at all) to 4 (A lot).

\*p< .05

TABLE 28

COMPARISON OF LOW SOCIAL-COMPETENCE SCHIZOPHRENICS vs. HIGH SOCIAL-COMPETENCE SCHIZOPHRENICS ON RATINGS MADE BY MALE AND FEMALE Bs ON THE QUESTION "DID THE PATIENT SHOW INTEREST IN RATING THE PHOTOS?"<sup>1</sup>

Male Bs			
	Mean	S.D.	t
Low S-C Ss	2.38		
		1.48	.83 N.S.
High S-C Ss	2.83		
Female Bs			
	Mean	S.D.	t
Low S-C Ss	2.21		
		1.20	.95 N.S.
High S-C Ss	2.63		

<sup>1</sup>Ratings were made on a five point Likert-type scale ranging from 0 (Not at all) to 4 (A lot).



## DISCUSSION

### Perspective

This study is one of many which deal with A-B x patient type interaction phenomena. Although there have been over eighty published studies examining various aspects of this phenomena, including studies of psychotherapy process and outcome; psychotherapy analogue studies; studies of attitudes of As and Bs toward differing types of patients; and studies of personality factors characterizing As and Bs, the data that has been garnered can only be characterized as inconclusive and sometimes contradictory.

This dissertation is a replication and extension of a study by Trattner and Howard (1970). That study was seen as a potentially important addition to the A-B literature primarily because the focus of study was the communication of expectancies, which is seen as a potent factor in successful psychotherapy and case management, as well as a phenomenon readily measurable by a well worked-out standardized procedure. The heart of the experimental procedure, the administering of the Rosenthal picture rating task by an aid to a patient, effectively narrows the range of behaviors under study so that a few variables can be isolated as dependent on the aid x patient pairings.

This is because the procedure allows only a minimal and substantially standardized interaction between the aids and patients. Variation in content of the verbalization directed to the patient by the aid is held to an absolute minimum. This allows voice quality to be studied with verbal content controlled. Essentially the aid greets the patient, asks him to have a seat, and then reads him a set of standardized instructions. If the expectancy is to be communicated, it must be within this circumscribed framework.

The present study used a larger number of patients and aids as experimental subjects than did the Trattner and Howard (1970) study, in an effort to increase the generalizability of the findings. Female aids were added in order to determine if the phenomenon being studied was applicable to the many females working as psychiatric aids and in various other capacities within the mental health field. Four additional vocal qualities, along with the vocal qualities examined by the Trattner and Howard (1970) research, were studied. The impressions each member of the aid x patient pairings formed of each other were also examined in a further effort to understand the effect of A-B x patient type pairings on the dyadic interaction involved in the Rosenthal picture rating task.

The results of the present study are in substantial

disagreement with those of the Trattner and Howard (1970) study. Although Bs of both sexes were significantly more successful in influencing high social competence schizophrenics than were As, As were not significantly more successful in influencing low S-C Ss. The voice quality findings of Trattner and Howard were not supported. There were no meaningful patterns indicating As and Bs vary their voices in ways measurable by this study's methodology when speaking to different categories of patients.

The final series of hypotheses of this study did not relate to the question of the replicability of the Trattner and Howard research. These hypotheses involved the impressions, or "attitudes" the aids and patients interacting in the picture sorting task formed of each other during their brief encounter. It was felt that if A and B aids were differentially effective in unintentionally influencing high and low social competence patients, that concomitantly, the members of the dyads formed by the various aid x patient pairings would have predictably varying impressions of their partners.

Two of the three statistically significant relationships found with regard to this series of hypotheses were of an interactional nature: Low S-C Ss rated As of both sexes less self-confident than their B counterparts; and male Bs liked high S-C Ss more than low S-C Ss, and saw

them as more cooperative. Only one pole of the interaction is supported in these findings. In other words, although male Bs liked high S-C Ss more and saw them as more cooperative, the opposite pole of the interaction did not hold true: Male As did not like low S-C Ss more than high S-C Ss, nor did they see them as more cooperative.

Conclusions can be drawn from these results, however. It appears that for male Bs, a patient's likeability is associated with his perceived cooperativeness, and patients seen as likeable and cooperative are more successfully influenced in the Rosenthal picture rating task. If one accepts the concept that high social competence schizophrenics are more like neurotics than are low social competence schizophrenics, this finding is consonant with that of Stein, Green, and Stone (1972) where B type male psychiatric residents assigned significantly higher likeability ratings to neurotic vignettes than to schizophrenic vignettes while As did not differentiate between the two diagnostic types.

The finding that Bs are seen as more self-confident than As (by low social competence patients) is consistent with the characterization of Bs as being, compared to As, more masculine (Lorr and McNair, 1966; Dublin, 1969; Berzins et al., 1971), risk-taking, dominant, variety-seeking, and counterdependent. (Berzins et al., 1971).

There must of course be some reservations in giving

weight to the ratings of aids made by schizophrenic inpatients, who are very disturbed in the realm of interpersonal perception and judgment.

Additionally, the psychiatric aids' ratings in this study are also somewhat suspect in light of the observation (discussed more fully below) that the aids seemed to perceive all the patients in the hospital as very much the same; that is, as persons to be manipulated in order to maintain efficiency and order in the hospital routine. This resulted in a sort of I-it relationship, which being antithetical to successful psychotherapy, severely limits the generalizability of the aids' ratings to the psychotherapeutic situation.

#### General Considerations and Conclusions

The first series of hypotheses, predicting differential expectancy effects from the various aid x patient pairings, were the heart of this study. The second and third series of hypotheses were subsidiary to the first, as they were directed at clarifying why the interaction effect predicted by the first series of hypotheses did in fact take place. Below is a discussion of possible reasons for the failure of the interaction effect found by Trattner and Howard (1970) to take place in this study.

The greatest difference between the Trattner and Howard (1970) experiment and the present one may very well

have been the nature of the aids used as Es. In both studies the aids were selected by the sole criteria of their completing and returning an A-B questionnaire, and their having scores on the extreme ends of the distribution of questionnaire scores. It is likely that the aids participating in the two studies, and the hospital milieu in the two studies, were unlike in several significant ways, and that these differences may have affected the outcomes of the two experiments.

The investigator worked out of the office of a clinical psychologist at the Florida Northeast State Hospital for approximately one month while working on various aspects of this study. During this time the investigator was able to talk to several aids and staff members of the hospital. These conversations, along with personal observations of the hospital's day to day functioning are the base upon which much of the following thinking rests.

The hospital is one of the major sources of employment in the area. The aids working there were mostly residents of Macclenny and nearby areas. Their motivation for working at the hospital, in many if not most instances, had little to do with any interest in working with "mentally ill" persons. Additionally, they were not consulted by the professional staff to help in forming treatment plans, nor were they in general treated as

significant, contributing members of the mental health team. Perhaps for these reasons, it appeared that very often patients were perceived by aids as nuisances, to be dealt with in a custodial manner geared to minimize disruption of the routine of the hospital.

This set of circumstances may have affected the study's outcome in a fundamental way. If A and B aids are to interact differently with different kinds of patients, as they did in the Trattner and Howard (1970) research, they must be able to distinguish, at some level of awareness, between low and high social competence patients. Trattner and Howard theorized that patients' level of social competence was communicated to the aids by the patients' non-verbal communications: how they looked, moved, and talked. The aids in the present study were unlikely to attend to a patient's unique non-verbal communications, and were therefore unlikely to differentiate between high and low social competence patients.

A related matter is the impact of racial prejudice on the attitudes of the aids toward patients and on the aid x patient dyadic interactions. Such a problem may have been a confounding variable in this study to a greater degree than in the Trattner and Howard (1970) research, which took place in Boston. The aids in the present study were all white, and all resided in rural Florida.

Blacks comprised 38% of the high S-C patients, and 58% of the low S-C patients. No data on the racial make-up of the participants in the Trattner and Howard study was published.

Another of the results of the aids' attitudes toward patients and their work may have been a lack of interest in carrying out the procedures required of them in the experiment. Experimenter expectancy effect is not likely to be manifested at all if the E in the experiment is not interested in its outcome. (Rosenthal, 1966) Only one of the 16 aids participating later asked if the patients had rated the pictures as predicted by the investigator in giving the instructions establishing experimenter expectancy.

Some of the aids expressed defensiveness about having to fill out the A-B questionnaire. Many asked if they were in some way being evaluated, a fear again expressed by several of the 16 aids serving as Es at the time the picture rating task was explained to them. This defensiveness and concern about evaluation of their performance may have affected the outcome of the study.

An unexpected complication that very probably affected the outcome of the experimenter expectancy hypotheses, as well as that of the voice quality hypotheses and the inter-judge reliability in rating vocal qualities, was that several of the aids had difficulty in effectively



reading the instructions to the patients. Some aids of both sexes and of both A and B types mispronounced words, and/or misread words.

The aids' attitudes toward the patients was perhaps reflected in the apparent lack of feeling and inflection in their voices as they read the instructions. This problem became apparent when the audiotapes were heard. An important factor contributing to low inter-judge reliability in rating the tapes was simply boredom brought on by the frequent poor quality of the aids' renderings of the instructions.

In conclusion, this study does not support the findings of the Trattner and Howard study (1970), which had opened a promising new line of inquiry in this area of research. The general dearth of theory in A-B research, along with the general inconsistency of experimental findings, make it difficult to pinpoint the reasons for the contradictory findings of this study and that of Trattner and Howard.

One portion of the study that explored an area not touched upon in the Trattner and Howard (1970) research did uncover some particularly useful findings. With regard to the question as to whether females can be meaningfully classified as As or Bs and whether their interactions with patients are related to their A-B status, this study's answer is clearly in the affirmative.

B status was significantly related to the effectiveness of female aids in influencing the picture rating responses of high S-C Ss. Performance differences among A and B females in interactions with patients have not previously been demonstrated in clinical or analogue research with the exceptions of a study of psychotherapy outcome in which two of six therapists involved were female (Berzins, Ross, and Friedman, 1972), a study in which B type mothers were more successful than A type mothers in modifying the enuretic behavior of their children (James and Foreman, 1973), and the unpublished Persinger et al. (1968) research in which both male and female ward personnel served as experimenters giving the Rosenthal picture rating task to inpatients.

Major recent studies (Berzins, Dove, and Ross, 1972; Berzins, Barnes, Cohen and Ross, 1971; Dublin, Elton, and Berzins, 1969) have been successful in finding personality correlates of A-B status that are invariate regardless of the sex of the As and Bs studied. Future research in the A-B area should be directed toward gathering more empirical evidence that treatment-relevant performance differences are not limited to male As and Bs.

## APPENDICES

## APPENDIX A

## PERSONAL INTERESTS QUESTIONNAIRE

Instructions: Please fill out the following questionnaire as truthfully as possible. This is not a test, so there are no "right" or "wrong" answers. Along with the answers given by all of the other attendants at the hospital, your answers will be pooled as part of some research that is being done during the next few weeks by a psychologist from the University of Florida. In order to insure confidentiality of your answers, no individual's questionnaire will be seen by anyone on the staff of the hospital. Please place your completed questionnaires face down in the box located in the nurse's station marked Personal Interests Questionnaires.

Name \_\_\_\_\_ (please print)

Sex M F (Circle one)

Ward

Days on duty: M T W Th Sat Sun (Circle the days you are on duty)

Hours of duty shift

For the following items, please indicate the degree of interest you would have in each of the activities, school subjects, or occupations listed, by placing a circle around the appropriate answer. Work rapidly.

- |                          |      |             |         |
|--------------------------|------|-------------|---------|
| 1. Drilling in a company | Like | Indifferent | Dislike |
| 2. Marine engineer       | Like | Indifferent | Dislike |
| 3. Mechanical engineer   | Like | Indifferent | Dislike |
| 4. Photo engraver        | Like | Indifferent | Dislike |
| 5. Specialty salesman    | Like | Indifferent | Dislike |
| 6. Toolmaker             | Like | Indifferent | Dislike |
| 7. Making a radio set    | Like | Indifferent | Dislike |
| 8. Building contractor   | Like | Indifferent | Dislike |

9. Carpenter	Like	Indifferent	Dislike
10. Ship officer	Like	Indifferent	Dislike
11. Manual training	Like	Indifferent	Dislike
12. Mechanical training	Like	Indifferent	Dislike
13. Adjusting a carburetor	Like	Indifferent	Dislike
14. Entertaining others	Like	Indifferent	Dislike
15. Cabinet making	Like	Indifferent	Dislike
16. Looking at shop windows	Like	Indifferent	Dislike

Answer the following items as truthfully as possible by circling one of the answers. Work rapidly.

17. I can accept just criticism without getting sore.	Yes	Not Sure	No
18. I can correct others without giving offense.	Yes	Not Sure	No
19. I can follow up subordinates effectively.	Yes	Not Sure	No
20. I have mechanical ingenuity (inventiveness).	Yes	Not Sure	No
21. I like mechanics magazines.	True		False
22. I think I would like the kind of work a forest ranger does.	True		False
23. In school, I was sometimes sent to the principal for cutting up.	True		False
24. At times I feel I can make up my mind with unusually great ease.	True		False
25. It does not bother me that I am not better looking.	True		False
26. It makes me feel like a failure when I hear of the success of someone I know well.	True		False
27. People often disappoint me.	True		False

28. Indicate which three of the following ten activities you would enjoy least by checking ( ) opposite them.

- ( ) a. Develop the theory of operation of a new machine, e.g. auto.
- ( ) b. Operate (manipulate) the machine.
- ( ) c. Discover an improvement in the design of the machine.
- ( ) d. Determine the cost of the operation of the machine.
- ( ) e. Supervise the manufacture of the machine.
- ( ) f. Create a new artistic effect, i.e., improve beauty of the auto.
- ( ) g. Sell the machine.
- ( ) h. Prepare the advertising for the machine.
- ( ) i. Teach others the use of the machine.
- ( ) j. Interest the public in the machine through public address.

29. Indicate by checking ( ) the three positions you would most prefer to hold in a club or society.

- ( ) a. President of a society or club.
- ( ) b. Secretary of a society or club.
- ( ) c. Member of a society or club.
- ( ) d. Treasurer of a society or club.
- ( ) e. Chairman, Arrangement Committee.
- ( ) f. Chairman, Educational Committee.
- ( ) g. Chairman, Entertainment Committee.
- ( ) h. Chairman, Membership Committee.
- ( ) i. Chairman, Program Committee.
- ( ) j. Chairman, Publicity Committee.

30. Indicate your choice of the following pair by checking ( ) in the first space if you prefer the item to the left, in the second space if you have no particular preference, or in the third space if you prefer the item to the right.

Many women friends      ( )   ( )   ( )   Few women friends

## APPENDIX B

## INSTRUCTIONS FOR PSYCHIATRIC AID

We are in the process of developing a test. You have been selected to give it to 8 patients because your answers on the questionnaire we gave to aids show that you are able to communicate well to patients.

This is the procedure to follow:

Read the instructions to the patient. Then take photo number 1 and say: "This is photo number 1," and hold it in front of the patient until he tells you his rating, which you will carefully write down on the recording sheet. Do this for all 10 photos. Do not let any patient see any photo for longer than about 5 seconds.

According to previous research of this kind, different patients have two distinct personality types, some averaging +5, and some averaging -5 on the photo rating test. You will be told before you see each patient which category he belongs to. This way you will know what average rating to expect from each patient.

Just read the instructions to the patients. Say nothing else to them except hello and goodbye.

GOOD LUCK

## APPENDIX C

## INSTRUCTIONS TO BE READ TO PATIENTS

I am going to read you some instructions. I am not permitted to say anything which is not in the instructions. I can, however, repeat the instructions if you don't understand them. OK?

We are in the process of developing a test of how well a person is able to judge the success or failure of another person. I will show you a series of photographs. For each one, I want you to judge whether the person pictured has been experiencing success or failure. To help you make more exact judgments you are to use this rating scale. As you can see, the scale runs from -10 to +10. A rating of +10 means that you judge the person to have experienced extreme failure. A rating of +1 means that you judge the person to have experienced a little success while a rating of -1 means that you judge the person to have experienced a little failure. You are to rate each photo as accurately as you can. Just tell me the rating you give to each photo. Ready? Here is the photo.



## APPENDIX D

## RATING SCALE

EXTREME FAILURE	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1		+1	+2	+3	+4	+5	+6	+7	+8	+9	+10
					MODERATE FAILURE			MILD FAILURE					MILD SUCCESS			MODERATE SUCCESS			EXTREME SUCCESS		

## APPENDIX E

Rate the patient you have just seen on a scale from 0 to 4 on the following: (Circle the best answer)

Did you like this patient?

NOT AT ALL				A LOT
0	1	2	3	4

Did you feel at ease with this patient?

NOT AT ALL				A LOT
0	1	2	3	4

Did the patient feel at ease?

NOT AT ALL				A LOT
0	1	2	3	4

Did the patient cooperate?

NOT AT ALL				A LOT
0	1	2	3	4

Did the patient show interest in rating the photos?

NOT AT ALL				A LOT
0	1	2	3	4

## APPENDIX F

Rate the aid you have just seen on a scale from 0 to 4 on the following: (Circle the best answer)

Did you like the aid?

NOT AT ALL				A LOT
0	1	2	3	4

---

Did you feel at ease with the aid?

NOT AT ALL				A LOT
0	1	2	3	4

---

Was the aid friendly?

NOT AT ALL				VERY FRIENDLY
0	1	2	3	4

---

Was the aid self-confident?

NOT AT ALL				VERY SELF-CONFIDENT
0	1	2	3	4

---

Was the aid a gentle, kind person?

NOT AT ALL				VERY GENTLE AND KIND
0	1	2	3	4

---

Was the aid a strong, dominant person?

NOT AT ALL				VERY STRONG AND DOMINANT
0	1	2	3	4

---

## APPENDIX G

kindness	0	1	2	3	4
sophistication	0	1	2	3	4
femininity	0	1	2	3	4
masculinity	0	1	2	3	4
dominance	0	1	2	3	4
coldness-distance	0	1	2	3	4
self-confidence	0	1	2	3	4
enthusiasm	0	1	2	3	4
softness	0	1	2	3	4
professionalness	0	1	2	3	4
warmth-friendliness	0	1	2	3	4
discomfort	0	1	2	3	4

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warmth-friendliness	0	1	2	3	4
self-confidence	0	1	2	3	4
coldness-distance	0	1	2	3	4
discomfort	0	1	2	3	4
sophistication	0	1	2	3	4
professionalness	0	1	2	3	4
softness	0	1	2	3	4
kindness	0	1	2	3	4
dominance	0	1	2	3	4
enthusiasm	0	1	2	3	4
femininity	0	1	2	3	4
masculinity	0	1	2	3	4

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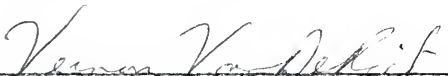
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#### BIOGRAPHICAL SKETCH


Donald John Taylor was born June 18, 1944, in Greeley, Colorado. He graduated from Greeley High School in 1962, and from the University of Wyoming in 1966. His undergraduate major was political science. While attending the University of Wyoming, he was initiated into Phi Beta Kappa, Phi Kappa Phi, and Omicron Delta Kappa. He enrolled in the University of Florida Department of Psychology in September of 1969. He was awarded a Master of Arts degree in June, 1973. In September, 1974, he began a twelve-month internship in clinical psychology at William Beaumont Army Medical Center in El Paso, Texas.

Donald John Taylor is married to the former Janet Elaine Parks. Ms. Taylor is an artist currently attending graduate school at the University of Northern Colorado.

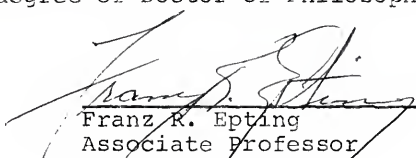
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Associate Professor of Psychology

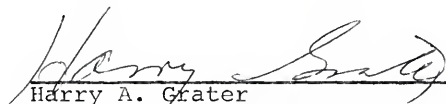
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D. L. Avila  
Professor of Foundations  
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Franz R. Epting  
Associate Professor  
of Psychology

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Harry A. Grater  
Professor of Psychology

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

A handwritten signature in dark ink, appearing to read "R. M. Swanson", is written over a horizontal line.

Richard M. Swanson  
Assistant Professor  
of Psychology

This dissertation was submitted to the Department of Psychology in the College of Arts and Sciences and to the Graduate Council, and was accepted as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

August, 1975

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Dean, Graduate School

